

We claim:

1. A method of evaluating quantitatively the ability of a solvent to clean a coating from a substrate using a glass panel drip test, comprising:
 - conducting a drip test on a coated glass panel;
 - placing a template behind the glass panel;
 - digitally acquiring an image of the glass panel and template into a computer; and
 - evaluating the glass panel for cleanliness based on the digital image of the glass panel and template.
2. The method of claim 1, wherein the template provides a contrasting solid color background for the digital image.
3. The method of claim 1, further comprising processing the digital image of the glass panel and template to determine actual area of the glass panel cleaned by the drip test greater than a pre-specified value.
4. The method of claim 3, wherein the pre-specified value is a pre-specified percentage.
5. An apparatus for evaluating quantitatively the ability of a solvent to clean a coating from a substrate using a glass panel drip test, comprising:
 - a test stand adapted to support a glass panel at a predetermined angle;
 - a drip test device adapted to deposit a preset number of solvent-based droplets onto a coated surface of the glass panel to clean the coated surface of coating; and
 - a computer adapted to digitally acquire an image of the glass panel and determine cleanliness of the glass panel surface after a drip test is conducted using the drip test device.

6. The apparatus of claim 5, further comprising a template positioned behind the glass panel, the template having a contrasting color or pattern thereon.

7. The apparatus of claim 6, wherein the template contrasting color or pattern is selected from the group consisting of a checkerboard pattern, a contrasting solid color, gray scales, or a custom-designed pattern.

8. The apparatus of claim 7, wherein the computer is programmed to process the digital image of the glass panel and template to determine actual area of the glass panel cleaned by the drip test greater than a pre-specified value.

9. The apparatus of claim 8, wherein the pre-specified value is a pre-specified percentage.

10. The apparatus of claim 5, wherein the test stand comprises opposing sidewalls defining slots therein adapted to support the glass panel at a preset angle.

11. A method of evaluating quantitatively the ability of a solvent to clean a coating from a substrate using a glass panel drip tests, comprising:
conducting a drip test on a coated glass panel;
placing a template behind the glass panel;
optically scanning the glass panel and template into a computer to form a digital image of the glass panel surface; and
processing the digital image of the glass panel surface to determine cleanliness of the area of the glass panel surface subjected to the drip test.

12. The method of claim 11, wherein the template provides a contrasting solid color background for the digital image.

13. The method of claim 11, wherein the step of processing the digital image comprises determining actual area of the glass panel surface subjected to the drip test greater than a pre-specified value.

14. The method of claim 13, wherein the pre-specified value is a pre-specified percentage.

15. The method of claim 11, further comprising evaluating the pixels of the digital image using a computer algorithm to determine how many pixels from the area of the glass panel surface subjected to the drip test have been cleaned.

16. The method of claim 15, wherein the step of evaluating the pixels comprises identifying a reference clean pixel from an uncoated area of the glass panel surface, identifying a reference dirty pixel from a coated area of the glass panel surface not subjected to the drip test, and comparing individually the pixels from the area of the glass panel surface subjected to the drip test with the reference clean and dirty pixels.

17. The method of claim 16, wherein the step of comparing individually the pixels from the area of the glass panel surface subjected to the drip test with the reference clean and dirty pixels further comprises calculating percent of cleanliness of each of the pixels from the area of the glass panel subjected to the drip test relative to the reference clean and dirty pixels.

18. The method of claim 17, further comprising displaying the percent of cleanliness values of each of the pixels from the area of the glass panel subjected to the drip test as a graph.

19. The method of claim 11, wherein the step of evaluating the pixels comprises using image analysis of the pixels to quantify the actual area of the glass panel cleaned by the drip test greater than a pre-specified value

20. The method of claim 19, wherein the pre-specified value is a pre-specified percentage.
21. The method of claim 11, further comprising assigning color values to the pixels of the digital image and evaluating the color values using a computer algorithm to determine how many pixels from the area of the glass panel surface subjected to the drip test have been cleaned.
22. The method of claim 21, wherein the step of evaluating the color values comprises identifying the color value of a reference clean pixel from an uncoated area of the glass panel surface, identifying the color value of a reference dirty pixel from a coated area of the glass panel surface not subjected to the drip test, and comparing individually the color values of the pixels from the area of the glass panel surface subjected to the drip test with the color values of the reference clean and dirty pixels.
23. The method of claim 22, wherein the step of comparing individually the color values of the pixels from the area of the glass panel surface subjected to the drip test with the color values of the reference clean and dirty pixels further comprises calculating percent of cleanliness using the color values of the pixels from the area of the glass panel subjected to the drip test relative to the color values of the reference clean and dirty pixels.
24. The method of claim 22, further comprising displaying the percent of cleanliness values of each of the pixels from the area of the glass panel subjected to the drip test as a graph.
25. The method of claim 11, wherein the step of evaluating the pixels comprises using image analysis of the pixels to quantify the actual area of the glass panel cleaned by the drip test greater than a pre-specified percentage.